

REMARKS

This Amendment is in response to the outstanding Office Action, dated November 25, 2002. Claims 16-24, 27 and 29 are presently in the application. Claim 19 has been deemed to be allowable if rewritten in independent form. Claims 16-18, 20-24, 27 and 29 have been rejected under 35 U.S.C. §102. By this Amendment, applicants have amended claims 16, 22, 24 and 27. Accordingly, claims 16-24, 27 and 29 are presently in the application. Claims 16, 22, 24 and 27 are independent.

Allowable Subject Matter

Applicants note with appreciation that Claim 19 was determined to be allowable if rewritten in independent form including all the limitations of the base claim and any intervening claim.

Rejections Under 35 U.S.C. § 102(b)

In the Office Action, claims 16, 18, 20, 22, 23 and 29 were rejected under 35 U.S.C. §102(b) based on European patent application No. 0 627 323 A2 to Yuji et al.

Claim 16 of the present application is directed to an ink cartridge comprising a plurality of ink storage chambers, wherein a first chamber of the ink storage chambers stores a light cyan ink, a second chamber of the ink storage chambers stores a deep cyan ink, a third chamber stores a light magenta ink, a fourth chamber a deep magenta ink and a fifth chamber a yellow ink. Importantly, the ink storage chambers are integrally formed in the ink cartridge.

Yuji discloses a system wherein separate and discreet ink tanks 160 are disposed upon a ink cartridge apparatus 152 disposed on the printer (see Yuji at Figs. 15-17 and specifically, Fig. 16.) The separate and discreet ink tanks 160 of Yuji are separate and removable from the ink

cartridge 152. The individual separate ink tanks 160 of Yuji, which may be positioned next to each other, each contain horizontal wall 161 separating upper and lower tanks which may contain dark and light inks of the same color (see Yuji at Fig. 16).

Applicants respectfully submit that Yuji does not disclose all the features recited by Claim 16, as amended, of the present application. For example, claim 16 recites that the ink storage chambers are integrally formed in the ink cartridge. In stark contrast, Yuji discloses a system wherein separate and discreet ink tanks 160 may be used in conjunction with an ink cartridge apparatus 152. Yuji does not disclose an ink cartridge wherein the ink storage chambers are integrally formed in the ink cartridge. Accordingly, applicants respectfully submit that Yuji does not disclose all the features as recited by claim 16, as amended, of the present application. Accordingly, applicants respectfully request withdrawal of the rejection to claim 16, as amended, under 35 U.S.C. §102(b) based on Yuji.

Claims 18, 20 and 29 depend from claim 16. Accordingly, applicants submit that, for the reasons discussed above with respect to claim 16, claims 18, 20 and 29 are allowable at least for depending from allowable claim 16. Furthermore, with respect to claim 18 of the present application, Yuji does not disclose a system where yellow is positioned at the end of the cartridge as Yuji discloses multiple yellow chambers. Accordingly, withdrawal of the rejections to those claims based on Yuji is requested.

Independent claim 22 of the present application, as amended, contains a similar limitation to that of claim 16, as discussed above, wherein the ink storage chambers are integrally formed in the ink cartridge. As stated above with respect to claim 16, applicants submit that Yuji does not disclose the ink storage chambers being integrally formed in the ink cartridge. Accordingly,

applicants respectfully submit that Yuji does not disclose all the features recited by claim 22 of the present application. Accordingly, applicants respectfully request withdrawal of the rejections to claim 22, as amended, under 35 U.S.C. §102(b) based upon Yuji.

Claim 23 depends from claim 22, accordingly, applicants respectfully submit that claim 23 is allowable, at least for depending from allowable claim 22, for the reasons discussed above with respect to the rejection to claim 22. Accordingly, applicants respectfully request withdrawal of the rejection to claim 23 under 35 U.S.C. §102(b) based on Yuji.

Claims 16-18, 20, 21, 24, 27 and 29 were rejected in the office action under 35 U.S.C. §102(b) based on European application No. 0 532 302 A2 to Toshimitsu et al.

Toshimitsu discloses an ink cartridge having eight recording heads. Toshimitsu does not disclose ink chambers being integrally formed within the ink cartridge. In fact, Toshimitsu appears to focus on other aspects of ink jet recording; Toshimitsu is silent as to the formation of the ink chambers in the ink cartridge (see e.g., Toshimitsu at Fig. 4 and Toshimitsu specification at page 4, lines 6-23.)

Applicants respectfully submit that Toshimitsu does not disclose all of the features as claimed by claim 16, as amended, of the present application. For example, Toshimitsu does not disclose the ink storage chambers being integrally formed in the ink cartridge. Accordingly, applicants submit that Toshimitsu does not disclose all the features of claim 16, as amended, of the present application. Accordingly, applicants respectfully request withdrawal of the rejection of claim 16 under 35 U.S.C. §102(b) based on Toshimitsu.

Claims 17, 18, 20, 21 and 29 depend from claim 16. Accordingly, applicants submit that claims 17, 18, 20, 21 and 29 are allowable, at least for depending from allowable claim 16, for reasons discussed above with regard to the rejection of claim 16. Accordingly, applicants respectfully request that the rejections to claims 17, 18, 20, 21 and 29 under 35 U.S.C. §102 based on Toshimitsu be withdrawn.

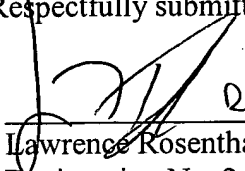
Independent claims 24 and 27, as amended, recite similar limitations to those of claim 16. For example, claims 24 and 27 both recite the limitation of the ink storage chambers being integrally formed in the ink cartridge. Accordingly, for the same reasons as discussed above with respect to the rejection of claim 16, applicants respectfully submit that Toshimitsu does not disclose all the features as recited by claims 24 and 27, as amended, of the present application. Accordingly, applicants respectfully request withdrawal of the rejections to claims 24 and 27 under 35 U.S.C. §102(b) based on Toshimitsu.

Accordingly, applicants respectfully submit that all of the claims presently in the application (i.e., 16-24, 27 and 29) are in condition for allowance. If the examiner cannot issue an immediate Notice of Allowance, the Examiner is respectfully requested to contact the undersigned attorney to discuss outstanding issues. Appended hereto are pages showing the amendments made to the claims and entitled "Version With Markings To Show Changes Made."

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Authority is hereby given to charge any additional needed fees to Deposit Account No.
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Respectfully submitted

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Version With Markings To Show Changes Made

Claims 16, 22, 24 and 27 have been amended by the present Amendment as follows:

16. (Twice Amended) An ink cartridge which is used for an ink-jet recording apparatus, comprising:

a plurality of ink storage chambers, wherein a first chamber of said ink storage chambers storing a light cyan ink, a second chamber of said ink storage chambers storing a deep cyan ink, a third chamber of said ink storage chambers storing a light magenta ink, a fourth chamber of said ink storage chambers storing a deep magenta ink and a fifth chamber of said ink storage chambers storing a yellow ink; and

wherein the ink storage chambers are [accommodated] integrally formed in the ink cartridge.

22. (Twice Amended) An ink cartridge mounted on an ink-jet recording apparatus and storing ink of a plurality of colors to be supplied to the ink-jet recording apparatus which has an ink-jet recording head for ejecting the ink and a plurality of ink supply needles for supplying the ink to the recording head, adjacent ones of said ink supply needles being arranged to have height difference therebetween, the ink cartridge comprising:

a plurality of ink storage chambers, wherein a first chamber of said ink storage chambers storing a light cyan ink, a second chamber of said ink storage chambers storing a deep cyan ink, a third chamber of said ink storage chambers storing a light magenta ink, a fourth chamber of said ink storage chambers storing a deep magenta ink and a fifth chamber of said ink storage chambers storing a yellow ink, the ink storage chambers being [accommodated] integrally formed in the ink cartridge; and

ink supply ports engaging with the ink supply needles so as to supply the ink stored in the ink storage chambers to the ink supply needles.

24. (Twice Amended) An ink cartridge which is used for an ink-jet recording apparatus, comprising:

a plurality of ink storage chambers storing ink of at least five different colors, the ink storage chambers being [accommodated] integrally formed in the ink cartridge;

wherein each ink storage chamber has an ink supply port, and all ink supply ports are aligned on one straight line; and

wherein the yellow ink is stored in the ink storage chamber located at the most end side of the ink storage chambers.

27. (Twice Amended) An ink cartridge which is used for an ink-jet recording apparatus, comprising:

a plurality of ink storage chambers storing ink of at least five different colors, the ink storage chambers being [accommodated] integrally formed in the ink cartridge;

wherein different chambers [colors] of the five different colors are adjacent to each other; and

wherein the ink storage chambers are arranged in an order of storing light cyan ink, deep cyan ink, light magenta ink, deep magenta ink and yellow ink in a horizontal direction.